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SMT Power Inductors

Power Beads - PA2983.XXXHL Series

Pulse a YAGEO company



- ***Current Rating:*** *Over 52Apk*
- ***Inductance Range:*** *23nH to 65nH*
- ***Height:*** *4.0mm Max*
- ***Footprint:*** *4.0mm x 5.0mm Max*
- *Halogen Free*

Electrical Specifications @ 25°C – Operating Temperature -40°C to +125°C

Part Number	Inductance[1] @ OA$_{DC}$ (nH +/- 15%)	Inductance @ Irated (nH TYP)	Irated[2] (A_{DC})	DCR[3] (mΩ nominal)	Saturation Current[4] (A TYP)		Heating Current[5] (A TYP)
					25°C	100°C	
PA2983.230HLT	23	23	30	0.33+/- 10%	75+	52	30
PA2983.650HLT	65	60	24	0.33 +/- 10%	29.5	24	30

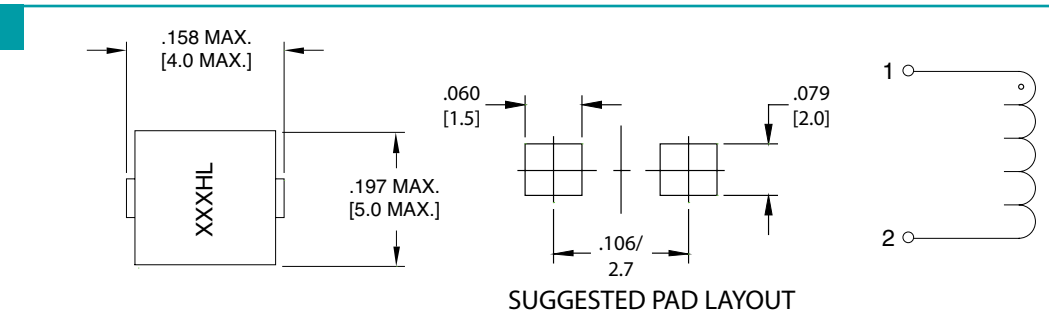
Notes:

1. Inductance is measured at 100kHz, 100mVrms.
2. The rated current as listed is either the saturation current or the heating current depending on which value is lower.
3. The nominal DCR is measured from point ⓐ to ⓑ , as shown below on the mechanical drawing.
4. The saturation current is the typical current which causes the inductance to drop by 20% at the stated ambient temperatures (25°C, 100°C). This current is determined by placing the component in the specified ambient environment and applying a short duration pulse current (to eliminate self-heating effects) to the component.
5. The heating current is the DC current which causes the part temperature to increase by approximately 40°C when used in a typical application.
6. In high volt*time applications, additional heating in the component can occure due to core losses in the inductor which may necessitate derating the current in order to limit the temperature rise of the component. To determine the approximate total losses (or temperature rise) for a given application, the coreloss and temperature rise curves can be used.
7. The "T" suffix indicates the part is shipped in tape and reel packaging. Pulse complies to the industry standard type and reel specification EIA481. The tape and reel for this product has a width (W=12mm), pitch (Po=0.8mm) and depth (Ko=12mm).
8. The temperature of the component (ambient plus temperature rise) must be within the stated operating temperature range.

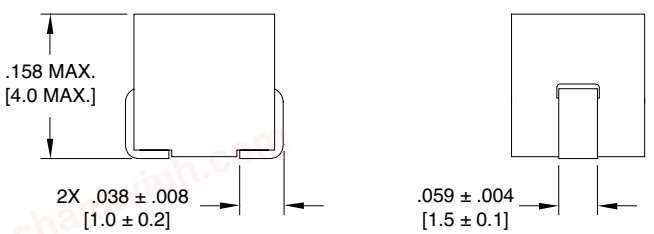
Mechanical

Schematic

PA2983.XXXHLT



SUGGESTED PAD LAYOUT



Weight .....0.8 grams
Tape & Reel 1200/reel

Dimensions: Inches / mm

Unless otherwise specified, all tolerances are ± .010 / 0,25

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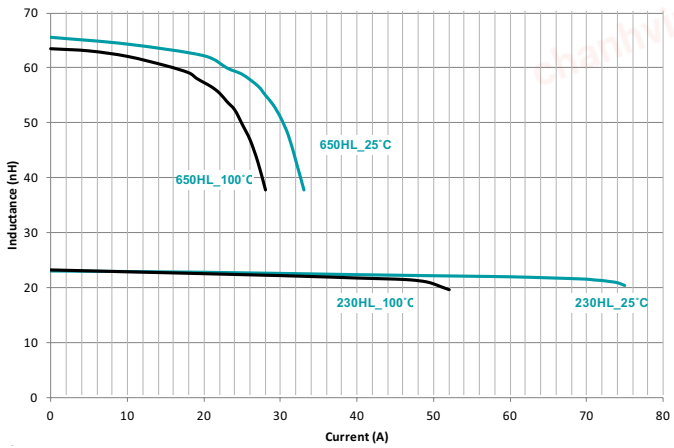
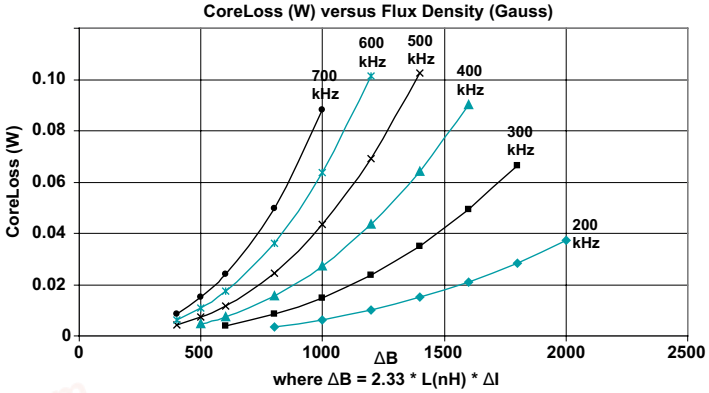
PA2983.XXXHL, LvsI, 25˚C and 100˚C

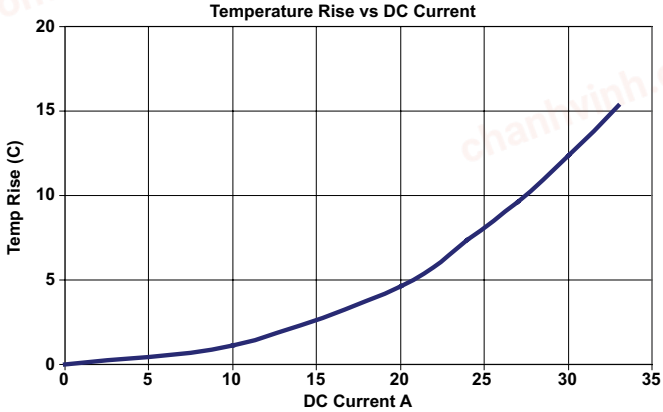


CoreLoss (W) versus Flux Density (Gauss)



where ΔB = 2.33 * L(nH) * ΔI

Temperature Rise vs DC Current



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